

REPORT  
OF THE MEDICAL OFFICER OF HEALTH  
FOR THE  
LEEK URBAN SANITARY DISTRICT.

In presenting my report of the Sanitary condition of the Urban District of Leek for 1897, it may be well first to take a review of some of the work hitherto accomplished, and the results that are apparent as the outcome of such action. The town is thoroughly well drained, and possesses an abundant supply of most excellent water which is flowing from the springs without intermission night and day. A systematic method of scavenging is regularly carried out whereby all deleterious accumulations are speedily removed from the dwelling-houses and the courts and yards surrounding. The ventilation of mills and houses has been vastly improved, and many unsanitary dwellings detrimental to public health have been done away with. Full regulations of Slaughter-Houses, Lodging-Houses, Markets, Dairies, and Cow-Sheds are enforced ; and a Hospital for the reception of infectious diseases has been erected which has had a most beneficial effect in preventing their spread and severity. The issue of these and similar hygienic measures has been to reduce the average annual rate of mortality during the last 30 years *30 per cent.*, and to increase the mean duration of life for the same period by a like amount ; a result assuredly of no mean importance.

The mortality returns for 1897 do not show quite so satisfactory a state as I was able to record last year—the deaths amounting on the whole to 289, or 32 in excess of 1896.

This number gives a rate of mortality according to present population of 19·2 in 1,000 of the living, but it includes 16 deaths of persons brought to the Public Institutions from other districts which, if eliminated would reduce the death-rate of the Leek Urban District proper to 18·1 in 1,000.

These 289 persons comprise 137 males and 152 females—the mean age of the former being 38 years, and of the latter 40·6, averaging for each individual 39·3 years, the highest point ever yet recorded.

The births registered during the year number 418—220 males and 198 females, the birth-rate being 27·7 in each 1,000.

Although the rate of mortality under the age of 1 year to 1,000 births registered within the district is 129—higher by 14 than last year—yet I am pleased to state it is much below the average return for many years past, and considerably less than that of the same class in the country generally. The note at the foot of Table 3 in the Inspector's report I fully agree with.

The deaths occurred at the following ages :

Under 1 year ...	...	...	54
Between 1 and 5 years	...	...	30
„ 5 and 15 „	...	...	9
„ 15 and 25 „	...	...	11
„ 25 and 65 „	...	...	112
Over 65 years ...	...	...	73

and it is interesting to observe the large proportions at the two extremes of life—the 84 children who died under 5 years only showed an average of just over 9 months, and the 73 old persons over 65 years had an average of 75·5 years.

In the *Zymotic* class of diseases we have 26 deaths, 20 being from *Whooping Cough*—an epidemic of which prevailed extensively in the town during the months of March, April, May and June. The deaths were chiefly of very young children. The disease is not notified in this district.

Although 75 of the 101 cases of infectious disease notified were *Scarlet Fever*, only 1 death resulted, and this was a case seen but a few hours before death and could not be removed to the Hospital. Three cases of *Diphtheria* were reported and all of them were soon better. One case notified as *Membranous Croup* died and was certified as *Diphtheria*, but no epidemic of this disease existed in the town. In this same class notifications of 16 cases of *Enteric Fever* were received, 9 of which were admitted into the Hospital. Of this disease 3 were cases imported into the town, and in spite of the most active efforts to ascertain the origin of the other cases no explanation was forthcoming. One death was recorded, that of a man 4 months after the onset of the malady.

73 cases of the 101 notified were admitted into the Hospital and not one death occurred in the number; another proof of what I have often referred to, viz.—the invaluable aid this Institution affords in preventing the spread and lessening the mortality of this class of diseases.

The following table compiled by the Inspector is of interest.

#### LEEK URBAN DISTRICT ISOLATION HOSPITAL.

Period of Years.	Cases Admitted	No. of Deaths.	Mortality per Cent.
1872-75	102	8	7.84
1876-80	60	6	10
1881-85	185	6	3.24
1886-90	108	15	8.92
1891-95	385	15	3.89
1896-97	120	2	1.66
1872-97	1020	52	5.09

The remarks in the Inspector's report in reference to isolation are worthy of attention.

In diseases classed as *Constitutional* we note 5 deaths from *Alcoholism*, the largest number I ever remember seeing recorded in our returns, as it is customary to put down the death to the disease or diseases consequent upon this condition rather than to the direct cause. Recent scientific observations have confirmed the belief long held by investigators that "alcohol is inimical to health by reducing the resisting power of the tissues, and that in small quantities it actually assists in the multiplication and growth of many microbes, and that also in some diseases at any rate its administration is not only not followed by any good effect but exerts a positively deleterious influence on the course of the disease," and nothing is more certain than that alcohol is responsible for a large proportion of the diseases of Brain, Heart, Liver and Kidneys observed, and this when taken in quantities far short of actual intoxication. The deaths from diseases of the organs named above are considerably in advance of those reported last year.

The only other remark necessary is the notable increase of deaths from Old Age, 22 being over 80 with an average of 84 years.

Regular inspections of the district have been made and monthly reports read before the Sanitary Committee wherein anything specially affecting the public health of the town is referred to, and although no point of particular moment needs comment now, yet a careful consideration of the detailed work of the department as presented in the Inspector's excellent report will show to any thoughtful individual that the great success achieved in Leek in relation to sanitary improvement is not likely to be lessened; and I can only ask for a continuance of the appreciation and help hitherto afforded by the inhabitants generally, whereby that success may be still further augmented.

Appended are Tables of Causes of and Ages at Death, and the Sanitary Inspector's Report.

J. J. RITCHIE,

Medical Officer of Health.



## CAUSES OF DEATH IN 1897.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Zymotic Diseases.													
Measles .....	1			1									2
Whooping Cough.....			2	7	3	7	1						20
Puerperal Fever .....							1						1
Scarlet Fever .....								1					1
Typhoid Fever.....											1		1
Diphtheria .....											1		1
Constitutional Diseases.													
Phthisis .....		3	3	4	2		1	2	6	2		2	25
Tubercular Diseases ..	1	1									1		3
Rheumatism.....	2							1					3
Syphilis .....			1										1
Alcoholism .....					2				1	1		1	5
Cancer .....						3			2		3	1	9
Local Diseases.													
Diseases of Brain, &c. .	3	4	2	6	2	2	3	2	4	4	4	1	37
„ Respiration ..	11	6	11	4	2	3		1	1	2	1	4	46
„ Circulation ..		1	4	6	1	4	1	2	1	4	6	4	34
„ Digestion ..	2			5		1	5	6	2	1		5	27
„ Urination ..				2	1	2		2	1		1	1	10
„ Locomotion ..						1							1
Developmental Diseases.													
Premature Birth .....	1	1		5					1	1			9
Old Age.....	2	4	6	3	6	3	1	3	1	2	2	4	37
Teething .....	1	1	1							1	1	1	6
Debility, &c.....						2			2				4
Childbirth.....						1							1
Sudden or Violent ..					2		1				2		5
Total.....	24	21	30	43	21	29	14	20	22	18	21	26	289

## AGES AT DEATH.

1897.	0-1	1-2	2-3	3-4	4-5	Total under 5.	5-10	10-15	15-25	25-35	35-45	45-55	55-65	65-75	75-85	85-95	Total
January ..	6	3	1	1	..	11	..	..	1	1	..	4	3	2	2	..	24
February ..	6	2	..	..	..	8	..	1	..	2	..	2	..	5	3	..	21
March ..	1	2	..	1	..	4	..	1	1	2	2	4	7	2	7	..	30
April .....	14	5	1	..	..	20	..	..	1	2	2	4	5	4	3	2	43
May .....	2	1	..	1	..	4	..	1	2	..	1	4	3	1	2	3	21
June .....	4	3	..	..	1	8	2	1	..	1	1	2	8	3	3	..	29
July.....	3	..	1	..	..	4	1	..	..	1	2	2	3	1	..	..	14
August ..	4	1	1	..	..	6	1	1	1	1	2	1	2	1	4	..	20
September ..	7	1	..	..	..	8	..	..	2	3	1	4	..	2	2	..	22
October ..	1	1	..	..	..	2	..	..	1	2	2	2	2	6	1	..	18
November ..	2	1	..	1	..	4	..	..	1	1	3	5	4	4	1	2	21
December ..	4	..	..	..	1	5	..	..	2	2	1	3	6	4	2	1	26
Total	54	20	4	4	2	84	4	5	11	18	15	35	44	35	30	8	289

## SANITARY INSPECTOR'S REPORT.

## ACTION TAKEN FOR THE ABATEMENT OF NUISANCES, &amp;c.

During the year ending December, 1897, the following cases of Nuisances and other matters complained of were dealt with, comprising :—

- 58 cases of defective or want of private drainage.
- 3 „ slop-stone drains admitting sewer gas in house dis-connected.
- 19 „ defective water closets.
- 16 „ offensive privies.
- 17 „ accumulation of offensive matter.
- 2 „ offensive cesspools filled up.
- 1 case want of drain ventilation.
- 3 cases dilapidated buildings.
- 4 „ houses in a filthy condition.
- 5 „ nuisances arising from over-crowding.
- 1 case of slaughter-house nuisance.

- 2 cases of water course polluted by sewage.
- 1 case of poultry kept in dwelling-house contrary to Bye-laws.
- 1 „ of nuisance from fish frying.
- 2 cases of want of proper paving in private yards attached to dwelling-houses.
- 1 case of want of privy or water closet accommodation.
- 10 cases of want of proper receptacles for ashes.
- 2 „ nuisance arising from dense black smoke.
- 26 houses, 5 schools, and 439 articles of infected bedding, &c., were disinfected or destroyed.

A considerable number of nuisances were abated without formal notice being given.

There are ten notices of nuisances remaining on the books not yet complied with.

#### OFFENSIVE PRIVIES AND CESSPOOLS.

- 6 offensive privies were converted into water closets.
- 5 offensive ashpits were abolished, and portable receptacles provided in lieu thereof.

#### REMOVAL OF ASHES AND NIGHT-SOIL.

The Scavenging Department removed 4696 loads of house ashes and garbage, and 314 loads of night-soil.

#### COMMON LODGING-HOUSES.

There are 4 houses licensed under the Common Lodging-houses Acts, for the reception of 117 casual lodgers. The regulations approved by the Local Government Board for the management of these houses have been satisfactorily observed. No case of infectious disease occurred in these houses during the year.

#### SLAUGHTER-HOUSES.

There are 6 Slaughter-houses within the Town licensed subject to the Bye-laws authorized by the Local Government Board.



## BAKEHOUSES AND WORKSHOPS.

The Bakehouses and Workshops within the limits of the Leek Improvement Act were inspected from time to time, and any suggestion made with a view to keeping the same in a satisfactory condition complied with by the occupier. There is now only one underground bakehouse within the town.

## PETROLEUM STORES.

There is one license in force within the Town for the keeping or sale of Petroleum or other substances of a like nature.

## GAS SUPPLY.

The purity of the Gas supplied to the Town was tested from time to time in the manner required by the 34th and 35th Vic., cap. 41. No impurity arising from the presence of sulphuretted hydrogen was shewn by the tests during the year 1897.

## NOTIFICATIONS OF INFECTIOUS DISEASE.

During the year ending 1897, 101 cases of infectious diseases, consisting of 75 cases of scarlet fever; 3 of diphtheria; 1 of membranous croup; 16 of enteric fever (3 of these cases were imported); and 6 from other causes were reported in the form set forth in the schedule provided in that behalf, and the necessary steps promptly taken to prevent the spread of the disease. 73 of these cases were removed to the hospital, and the remainder treated at their homes. Notwithstanding the efforts of the department, it has been found exceedingly difficult in many cases to secure satisfactory isolation of cases of scarlet fever at home. Thoughtless persons attending upon the patient mixing with others without taking proper precautions, and receiving visitors into the infected house, have been the means of spreading the infection to a large extent. In other instances cases have been of so mild a character that it was not thought necessary to call in the doctor, and the case has gone unrecognised, the children being allowed to mix with others, and spread the infection. The source of milk supply is recorded in every case of infectious disease notified, and we have no evidence of any mischief resulting from its distribution.



## ISOLATION HOSPITAL.

Year ending December, 1897.

Number of patients in Hospital, Jan. 1st, 1897	...	...	14
Do. do. admitted during the year	...	...	73
Do. do. discharged do.	...	...	82
Do. do. in Hospital, Dec. 31st, 1897	...	...	5

The average duration in Hospital of each patient discharged was 36.5 days.

No death occurred among the Patients treated in the Hospital during the year.

## INTERMENTS WITHIN THE TOWN.

During the year ending December, 1897, 6 interments took place in the Burial Ground attached to St. Edward's Church, and 7 in the ground attached to Mount Pleasant Wesleyan Chapel. The provisions of the Orders in Council relating thereto were duly observed.

TABLE I.—ABSTRACT OF THE CENSUS RETURNS OF 1851, 1861, 1871, 1881 AND 1891, WITHIN THE LIMITS OF THE LEEK IMPROVEMENT ACT.

Census Year	Area in Statute Acres	HOUSES.			PERSONS.		
		In-habited	Unin-habited	Build-ing	Males	Fe-males	TOTAL
1851	1460	1791	39	22	4315	4781	9066
1861	1460	2228	101	27	4686	5488	10174
1871	1460	2386	88	2	5087	6244	11331
1881	1460	2726	136	18	5874	6991	12865
1891	1460	3022	169	24	6420	7708	14128

TABLE 2.—POPULATION, BIRTHS AND DEATHS.

Table shewing the mean Population, the number of Births and Deaths, and the average annual number of Births and Deaths to 1000 persons living, and the mean Age at Death of males, females and persons within the limits of the Leek Improvement Act, during various periods of the 47 years ending 1897.—(W. H. H.)

Periods.	Mean Population	Total number of		Average Annual Number of Births and Deaths to 1000 living.		Mean Age at Death.		
		Births	Deaths	Births	Deaths	Males <i>Years.</i>	Females <i>Years.</i>	Persons <i>Years.</i>
10 years 1851-60	9635	3440	2819	35'7	29'3	23'5	25'9	24'8
10 years 1861-70	10752	3516	2540	32'7	23'6	29'1	34'7	32'0
10 years 1871-80	12098	4167	2734	34'4	22'6	30'8	32'3	31'5
10 years 1881-90	13496	4146	2668	30'1	19'8	32'7	35'9	34'3
1891	14154	406	257	28'7	18'2	36'9	38'6	37'8
1892	14289	417	322	29'1	22'5	33'9	38'7	36'7
1893	14406	425	292	29'5	20'2	36'9	39'8	38'6
1894	14573	429	250	29'4	17'1	33'0	36'8	34'9
1895	14746	447	295	30'3	20'0	33'9	36'5	34'8
1896	14920	408	257	27'3	17'2	36'7	36'0	36'4
1897	15037	418	289	27'7	19'2	38'0	40'6	39'3

<sup>a</sup> This number includes 16 persons brought to Public Institutions from other Districts, viz., from Onecote Quarford 1, Smallthorne 4, Warslow 2, Biddulph 2, Rudyard 1, Norton 1, Longnor 1, and Horton 1 (who died in Workhouse), and from Salford 1, and from Rudyard 1 (who died in the Cottage Hospital).

Excluding the 16 Deaths in Public Institutions in the Town of persons brought there from other Districts, the corrected annual rate of mortality in the Urban District of Leek for the year ending December, 1897, is 18·1 to 1,000 living. Provided the vital experience of the Urban District during the year 1897 were continued for all time hereafter, the mean duration of life of each person born would amount to 46·7 years, or 5·9 years longer life than that given for England and Wales in the "English Life Table, No. 3."

Urged by our good friend, the late Sir E. Chadwick, we commenced keeping our vital statistical record in 1851, in the compound form suggested by the late Dr. Farr, Superintendent of the Vital Statistical Department of Somerset House. For various sanitary purposes this record has afforded valuable information.

It will be seen by the foregoing No. 2 Abstract Table that during the last 17 years, the rate of mortality has been reduced 30 per cent., and the duration of life increased 30 per cent., which is equivalent to a reduction of 30 per cent. in the rate of sickness. Gradually is the fact being more fully recognised that in proportion as health is protected, and the duration of life enhanced, the wealth of the community is increased.

TABLE 3.—INFANT MORTALITY.

Table showing the number of Births ; the number of Deaths under 1 year ; and the rate of mortality to 1,000 births, within the limits of the Leek Improvement Act, during various periods of the 47 years ending 1897.

Periods.	Number of		Rate of Mor- tality to 1000.
	Births	Deaths under 1 year	
10 years 1851-60	3440	646	187·8
10 years 1861-70	3516	573	162·9
10 years 1871-80	4167	670	160·7
10 years 1881-90	4146	585	141·1
Year 1891	406	51	125·6
.. 1892	417	65	155·8
.. 1893	425	59	138·8
.. 1894	429	71	166·3
.. 1895	447	81	181·2
.. 1896	408	47	115·2
.. 1897	418	54	129·2

There is no doubt but that the objectionable system of the employment of mothers of infants from their homes is, to a large extent, responsible for the loss of infant life.

TABLE 4.

Percentage of Illegitimate Births in Leek during each of the under-mentioned periods of the 47 years ending 1897.

Periods of Years.	Percentage of Illegitimate Births.
10 years 1851-60	9.7
10 years 1861-70	8.8
10 years 1871-80	8.5
10 years 1881-90	6.8
Year 1891	5.2
" 1892	4.8
" 1893	6.8
" 1894	6.3
" 1895	5.6
" 1896	4.6
" 1897	5.0

#### HOUSING OF THE WORKING CLASSES' ACT, 1890.

During the year 1897, it has not been necessary to resort to the provisions of this Act.

#### CANAL BOATS ACTS, 1877 AND 1884.

During the year ending December, 1897, I inspected 40 Canal Boats within the Urban Sanitary District of Leek. With two exceptions, the condition of the Boats and their occupants, as regards the several matters dealt with in the Acts and Regulations, was satisfactory. No proceedings were taken beyond cautioning the persons concerned.

## DAIRIES, COW-SHEDS &amp; MILK-SHOPS ORDERS, 1885-6.

There are 42 persons registered pursuant to the above-mentioned Orders within the Urban Sanitary District of Leek. All registered premises were inspected half-yearly. The Regulations of the Local Authority made in that behalf, which came into force on the first day of August, 1891, are being enforced. There are 220 milch cows kept within the district.

## SANITARY CONDITION OF SCHOOLS.

During the year considerable sums have been expended by managers of Elementary Schools in increasing the accommodation, and materially improving their Sanitary condition. The total number of scholars on the register at the end of December, 1897, was 2,911, and the average per centage of attendance during that month was 80·5.

R. FARROW,

Sanitary Inspector.

